

**FAIRCHILD**

A Schlumberger Company

**FDH900/FDLL900**

**FDH999/FDLL999**

High Speed Switching Diodes

T-03-09

- BV...45V (FDH900), 35 V (FDH999)
- $t_{rr}$ ...4.0 ns (FDH900), 5.0 ns (FDH999)

**ABSOLUTE MAXIMUM RATINGS (Note 1)**

**Temperatures**

Storage Temperature Range  
Max. Junction Operating Temperature  
Lead Temperature

-65°C to +200°C  
+175°C  
+260°C

**Power Dissipation (Note 2)**

Maximum Total Dissipation at 25°C Ambient  
Linear Derating Factor (From 25°C)

500 mW  
3.3 mW/°C.

**Maximum Voltage and Currents**

WIV Working Inverse Voltage FDH900  
FDH999

40 V  
25 V

$I_O$  Average Rectified Current  
 $I_F$  Continuous Forward Current  
 $I_f$  Recurrent Peak Forward Current  
 $I_f(\text{surge})$  Peak Forward Surge Current  
Pulse Width = 1.0 s  
Pulse Width = 1.0  $\mu$ s

200 mA  
500 mA  
600 mA  
1.0 A  
4.0 A

**PACKAGES**

FDH900 DO-35  
FDH999 DO-35  
FDLL900 LL-34  
FDLL999 LL-34

If you need this device in the SOT package, an electrical equivalent is available. See FDSO1200 family.

**ELECTRICAL CHARACTERISTICS (25°C Ambient Temperature unless otherwise noted)**

SYMBOL	CHARACTERISTIC	FDH900		FDH999		UNITS	TEST CONDITIONS
		MIN	MAX	MIN	MAX		
BV	Breakdown Voltage	45		35		V	$I_R = 5.0 \mu A$
$I_R$	Reverse Current		500		1.0	$\mu A$ nA	$V_R = 25 V$ $V_R = 40 V$
$V_F$	Forward Voltage		1.0		1.0	V V	$I_F = 10 mA$ $I_F = 100 mA$
C	Capacitance		3.0		5.0	pF	$V_R = 0, f = 1.0 MHz$
$t_{rr}$	Reverse Recovery Time		4.0		5.0	ns	$I_F = 10 mA, I_R = 10 mA,$ $R_L = 100 \Omega, I_{rr} = 1.0 mA$

**NOTES:**

1. These ratings are limiting values above which the serviceability of any individual semiconductor device may be impaired.
2. These are steady state limits. The factory should be consulted on applications involving pulsed or low duty-cycle operation.
3. For product family characteristic curves, refer to Chapter 4, D4.